

Education and Research Center

Summary Annual Report
July 1, 2009 – June 30, 2010

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Submitted by:
Noah S. Seixas, PhD
Center Director
University of Washington
Seattle, WA 98195

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Annual Report: July 1, 2009 to June 30, 2010
Northwest Center for Occupational Health and Safety (NWCOS)
Education and Research Center (ERC)
Center Director: Noah Seixas, PhD

The Northwest Center for Occupational Health and Safety is dedicated to preventing disease and injury among the workers in Washington, Idaho, Oregon and Alaska. This mission is accomplished through strong research-based graduate education, continuing education for practicing professionals, and outreach and services to the region. In the 2009-2010 academic year, each of our programs remained strong, with ERC-supported trainees numbering eleven in Industrial Hygiene (IH), eight in Occupational Health Nursing (OHN), three in Occupational and Environmental Medicine (OEM), four in Occupational Health Services Research Training (OHSRT), and two in Hazardous Substances Academic Training (HSAT). During the reporting period we graduated nine students with an MS in IH, one with a PhD in IH, two with an MPH in OEM, two with an MN in OHN, and four with MS degrees in HSAT (three had received support in previous years).

Center Administration (Program Director: Noah Seixas)

The Northwest Center for Occupational Health and Safety (NWCOS), housed within the Department of Environmental and Occupational Health Sciences at the University of Washington, is guided by an executive committee made up of the program directors, and by a ten-member External Advisory Board. Interdisciplinary training remains a hallmark of our programs, bringing together students and practitioners in IH, OHN, OEM, and other allied professions in academic classes, conferences, seminars, and research teams. Trainees and practitioners also interact extensively via our digital media and social networking initiatives. In addition, all of our trainees participate in research ethics training through the Biomedical Research Integrity seminar series.

A major focus of the year's work was the preparation of a competing renewal application. Preparation included development of proposals for innovative and responsive new programs, and revisions of existing programs where needed. In particular, a revised Exposure Sciences Curriculum (including traditional occupational hygiene), a Global Occupational Health program, and a Collaborative Research Training program (including students from Toxicology, Epidemiology and Industrial Engineering) were proposed.

The Center sponsored a comprehensive Alumni Survey assessing alumni satisfaction with training programs, placement in professional work, and needs for future training were assessed. Results of the survey can be accessed at http://depts.washington.edu/nwcohs/documents/alumni_report.pdf.

In addition, the NWCOS conducted a study of indicators of occupational health and safety performance indicators within the 4-state Region 10, using a combination of existing state and federal data resources. This report can be found at <http://depts.washington.edu/nwcohs/documents/ohindicatorsregion10.pdf>.

Industrial Hygiene (Program Director: Michael Yost)

The 2009 - 2010 year was highly productive in having nine MS graduates and one PhD graduate from the program. Dr. Lynn Wilder, (EOH- PhD 2010) now is working for ATSDR as a senior Industrial Hygienist. Another recent graduate, Dr. Dianna Caballos has accepted a post-doctoral fellow position at NIOSH in the health hazard evaluation branch. Among the honors for other students, Ms. Vanessa Galaviz (PhD candidate, EOH) was awarded a \$2000 scholarship from the San Diego chapter of MANA, A National Latina Organization, for her work on Hispanic workers exposed to diesel particulates. Master's degree student Stephanie Chan will attend a summer training program at the University of California at San Francisco for minority students interested in pursuing doctoral programs in cancer research. Ms. Miyoko Sasakura was nominated for the Department's outstanding student award. Dr. Chris Simpson was successfully promoted to the rank of Associate Professor in 2009. In addition to the seven new grants received during the reporting period, core faculty anticipate the awarding of at least three additional grants, including a major Clean Air Research Center award from US-EPA.

Occupational Health Nursing (Program Director: Arnold (Butch) de Castro)

During this period, a total of eight students participated in the OHN program: three PhD, two MN-OHN Administrator, two MN-OHN Nurse Practitioner, and one DNP-OHN Nurse Practitioner students, including four individuals from underrepresented minority groups. OHN trainees participated in OHN Program faculty

projects with manuscripts in development. The MN-OHN administrator graduate, Kelli Barber, received a faculty appointment at a nursing school in Montana and the MN-OHN nurse practitioner graduate, Nawo Fiamo, was hired into an occupational medicine clinic in central Washington State. Dr. Butch de Castro continued as OHN Program Director, with Dr. Randal Beaton as Assistant Director. Julie Ward, MN, a graduate of the OHN Program in June 2009, was appointed as Clinical Instructor to the program. Collectively, OHN Program faculty actively pursued and received both intramural and extramural funding awards, including those from CDC-NIOSH and the National Institutes of Health, to support research projects. The OHN Program curriculum overall continued to emphasize a population-based orientation that conceptualizes occupational health and safety within an ecological framework in order to examine the interplay of multilevel individual, organizational, community, and societal factors, and how they interact to influence worker health and well-being. Also, both in-person and distance/online continuing education offerings were developed and conducted to serve the practice needs and interests of regional OHN (and other OHS) professionals, including workshops on workplace bullying and an OHN institute for nurses without formal training in occupational health.

Occupational and Environmental Medicine (Program Director: Joel Kaufman)

The OEM Residency completed its ACGME site visit in early 2010, and based on the success of this visit, we were awarded full accreditation for five years by the Residency Review Committee. Dr. Victor Van Hee, a former graduate of the training program was promoted to Assistant Professor and has taken on leadership of the fellowship program. In a new collaboration, the Residency Program is now sponsored by the University of Washington office of Graduate Medical Education in the School of Medicine, allowing the program to benefit from the guidance of an experienced institutional sponsor with over 90 accredited training programs. Under the guidance of the GME office, the residency program has reinvigorated its annual review process, incorporating the knowledge of regional experts in OEM for continuous quality improvement. Trainee Rachel Fischer was awarded the 2010 American Occupational Health Conference Resident Research Presentation Award. Trainee June Spector was promoted to Acting Instructor on completion of her fellowship and is currently completing a post-doctoral training program in environmental health (BEBTEH) at the University of Washington. This national award and competitive post-doctoral fellowship faculty position highlight the high quality of the UW's OEM trainees.

Occupational Health Services Research Training (Program Director: Diane Martin)

The Occupational Health Services Research (OHSRT) Training Program was directed by Drs. Diane Martin and Gary Franklin. They replaced Dr. Tom Wickizer who accepted an endowed professorship at the Ohio State University. Dr. Martin received CDC funding for a three year study to increase adult immunizations in the workplace. Two doctoral students were supported by the OHSRT program this year. One, Janessa Graves, gave two presentations at occupational health meetings, including her work in Kenya on an intervention to promote handwashing in schools. For her dissertation, she is evaluating a Washington State policy to decrease the use of expensive imaging for low back pain. The other student, Benjamin Keeney, is working with Dr. Franklin on the utilization, cost and health outcomes for Washington State workers with low back pain. A third OHSRT student, supported by NORA funds, conducted research with low income Vietnamese men and women and asked about how their jobs affected their health and mental well being.

NORA Research Training (Program Director: Noah Seixas)

In addition to supporting three trainees, NORA Research Training funds were used to support student travel and the NWCOHS partnered with the Northwest Occupational Health Conference (NOHC) on a new project called the Student Research Forum Competition to provide funding to current and recent graduate students attending the annual NOHC event. For the 2009 competition, five individual prizes were awarded. UW recipients included Jeanne Spears (former ERC trainee), Diane Ceballos (former ERC Trainee), and June Spector (09-10 ERC trainee). In addition, Serena Siow and Mussarat Nahid from the University of British Columbia also received awards. In addition NORA funds were used to support a comprehensive assessment of OH Indicators for the four Region 10 states (see below).

Pilot/Small Project Research Training Program (Program Director: Noah Seixas)

Four pilot projects were funded during this period, two UW projects, one project at Boise State University, and one project at the Center for Research on Occupational and Environmental Toxicology (CROET) at Oregon Health and Science University. The first UW project "Organophosphorus pesticide oxygen analogs and worker exposure during and following agricultural spraying: are they present in air or an artifact of sampling" was lead

by IH PhD trainee Jenna Armstrong who was advised by Dr. Richard Fenske and Dr. Michael Yost. A second project at the UW, "Using new technologies to characterize and reduce whole body vibration exposures", was lead by IH PhD student and former ERC trainee Ryan Blood under the supervision of Dr. Peter Johnson. Preliminary research from this project was presented at the 29th Annual Alaska Governor's Safety & Health Conference in March of 2010. Dr. Kai Elgethun served as Principal Investigator (PI) for the Boise State Project, "Development & Evaluation of a 'Master Mercury Checklist for Schools' for Possible Adoption by the NIOSH Safety Checklist Program for Schools" and Dr. Ryan Olson served as the PI for the CROET project, "Development and Evaluation of a Safety Surveillance Tool for Homecare Workers".

Hazardous Substance Academic Training, (Program Director: John Kissel)

In the July 1, 2009 - June 30, 2010 window, four prior recipients of HSAT support received their MS Degree. Two additional trainees who were supported in 2009-2010, and one new trainee who will be supported in the 2010-2011 academic year are on track to graduate by June 2011. Two journal articles with trainee first-authors were submitted and five conference presentations with trainee authors or co-authors were delivered in the annual reporting period. Three HSAT trainees completed all requirements for 40-hour HAZWOPER certification or recertification. Four additional certifications or re-certifications were issued to non-trainees under HSAT auspices.

Hazardous Substance Training (Program Director: Steven Hecker)

The HST program provided in-person courses to 272 trainees, with slightly over 80% representative of governmental agencies. The year's course offerings centered on eight sessions of the ever popular "Essentials of Hazardous Materials Management" course along with the new and exceptionally well attended three day summer course on "Hazardous Materials Requirements of the Building, Fire and Mechanical Codes". This latter class referenced NFPA Standards and drew attendees representative of the public service sector and from the fields of industrial hygiene, safety personnel and fire department personnel.

Continuing Education/Outreach (Program Director: Steven Hecker)

The 2009 - 2010 period brought a total 2597 trainees to the online and in-person offerings for both CE and HST. Of these, a total of 1053 trainees attended CE and HST classroom courses and 1544 trainees participated in online CE and HST offerings.

Program highlights include: synchronous delivery of OEM Grand Rounds and approval of OEM Grand Rounds Sessions by the American Board of Preventive Medicine for Maintenance of Certification Credits (MOC); collaboration with UC Berkeley to offer two sessions of the highly demanded workshop on "Staying Safe at Work: Teaching workers with developmental disabilities about health and safety on the job"; and select outreach in the areas of workplace violence and an innovative web accessible hybrid program for occupational health nursing continuing education.

The 2009 Washington Governor's Safety Conference featured a well received "Workplace Violence: From Reaction to Prevention and Coping" conference. In this same vein of addressing workplace violence, and specifically as relates to nurses, the NWC partnered with the Washington State Nurses Association and the UW Occupational Health Nursing Program, to deliver the "Violence in the Health Care Workplace: Translating Knowledge to Prevention" workshop. Delivered to five locations (including two sessions in rural locations) around the state of Washington, the workshop drew 189 attendees.

The innovative Occupational Health Nursing Summer Institute was delivered as a hybrid program to regional participants in Washington, Oregon and Idaho (with special note that pressing work obligations prevented the two Alaska registrants from participation). Comprised of five online OSH modules and a live-streamed seminar delivered in June, as a pilot project, the Institute was primarily for nurses not trained in occupational health. Fifteen nurses participated with all facets of the Institute. In addition, seven of Dr. Leslie Hammer's occupational health psychology students at Portland State University (a NIOSH TPG) completed and provided reviews of the online modules. The overall positive reviews and lessons learned from this year's Institute lends to the interest in developing and implementing similar basic OHS training programs for nursing and other disciplines in future years.